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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,235	11/12/2003	Munekatsu Shimada	50353-624	3529

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EXAMINER
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SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/705,235	<b>Applicant(s)</b> SHIMADA ET AL.	
	<b>Examiner</b> John P. Sheehan	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 to 11, drawn to an Nd-Fe-B rare earth magnet alloy having hard and soft magnetic phases wherein the minimum width of the soft phase is smaller than or equal to 1 micron and the minimum distance between the soft magnetic phases is greater than or equal to 0.1 micron and a powder of the same rare earth-iron-boron alloy and structure, classified in class 148, subclass 302.
  - II. Claims 12 to 14, drawn to a method of making a rare earth-iron-boron alloy powder having hard and soft magnetic phases wherein the minimum width of the soft phase is smaller than or equal to 1 micron and the minimum distance between the soft magnetic phases is greater than or equal to 0.1 micron comprising pulverizing the rare earth-iron-boron alloy in a ball mill using a dispersant under a non-oxidizing atmosphere, classified in class 241, subclass 15.
  - III. Claims 15 and 16, drawn to a method of making a sintered rare earth-iron-boron anisotropic exchange spring magnet comprising: obtaining a rare earth-iron-boron alloy powder having hard and soft magnetic phases wherein the minimum width of the soft phase is smaller than or equal to 1 micron and the minimum distance between the soft magnetic phases is

greater than or equal to 0.1 micron, compacting the powder at a pressure of 1 to 5 ton/cm<sup>2</sup> in a magnetic field ranging from 15 to 25 kOe, and sintering the powder compact at a temperature of 600 to 800 °C under a pressure of 1 to 10 ton/cm<sup>2</sup> in a discharge plasma sintering unit, classified in class 419, subclass 12.

- IV. Claims 17 to 19, drawn to a rare earth-iron-boron anisotropic exchange spring magnet and motor comprising said rare earth-iron-boron anisotropic exchange spring magnet produced by the method comprising obtaining a rare earth-iron-boron alloy powder having hard and soft magnetic phases wherein the minimum width of the soft phase is smaller than or equal to 1 micron and the minimum distance between the soft magnetic phases is greater than or equal to 0.1 micron, compacting the powder at a pressure of 1 to 5 ton/cm<sup>2</sup> in a magnetic field ranging from 15 to 25 kOe, and sintering the powder compact at a temperature of 600 to 800 °C under a pressure of 1 to 10 ton/cm<sup>2</sup> in a discharge plasma sintering unit, classified in class 75, subclass 244.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another

and materially different process such as, for example, strip casting the rare earth-iron-boron alloy, controlling the cooling rate during the strip casting process and/or heat treating the strip cast alloy to obtain the desired phase structure and optionally pulverizing the cast alloy to form the rare earth-iron-boron alloy powder.

3. The product of the Group I and the process of the Group III inventions are distinct in that the process of the Group III invention is not the method of making the Group I invention. Thus, these inventions are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Inventions I and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful to make resin bonded rare earth-iron-boron permanent magnets and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

5. The Group II and Group III inventions are distinct in that they are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. The Group II and Group IV inventions are distinct in that they are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. Inventions III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the

process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as a process employing a different compaction pressure and/or magnetic field strength and/or sintering temperature and/or different sintering pressure. While it is noted that claims 17 to 19 are product-by-process claims and incorporates the same process steps as described in the process of Group III, a product defined by the process by which it can be made is still a product claim (In re Bridgeford, 149 USPQ 55 (CCPA 1966)) and can be restricted from the process if the examiner can demonstrate that the product as claimed can be made by another materially different process such as the alternative process described above. See In re Brown, 173 U.S.P.Q. 685, and In re Fessmann, 180 U.S.P.Q. 324, for analysis of weight given to process step recitations in product claims also see MPEP 2113 and 806.05(f).

8. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification and because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

9. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

10. The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

11. Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps